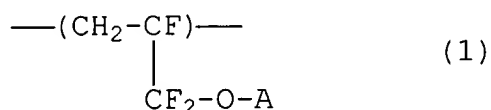


AMENDMENTS TO THE CLAIMS

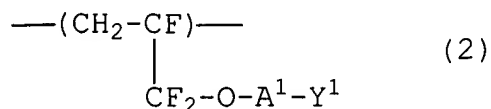
This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. **(Currently Amended)** A fluorine-containing allyl ether polymer having a number average molecular weight of 1,000 to 1,000,000 and consisting of chains of at least one repeating unit selected from the group consisting essentially of a repeating unit of the formula:



wherein A is alkyl or fluoroalkyl groups having 1 to 50 carbon atoms, alkenyl or fluoroalkenyl groups having 2 to 50 carbon atoms, alkynyl or fluoroalkynyl groups having 2 to 50 carbon atoms, alkyl or fluoroalkyl groups having an ether bond and 1 to 60 carbon atoms, alkenyl or fluoroalkenyl groups having an ether bond and 2 to 60 carbon atoms, alkynyl or fluoroalkynyl groups having an ether bond and 2 to 60 carbon atoms, aryl or fluoroaryl groups having 4 to 30 carbon atoms, and a repeating unit of the formula:



wherein A¹ is a divalent organic group having 1 to 60 carbon atoms, and Y¹ is ~~CH₂OH, COOH, COOR¹ in which R¹ is a hydrocarbon group having 1 to~~

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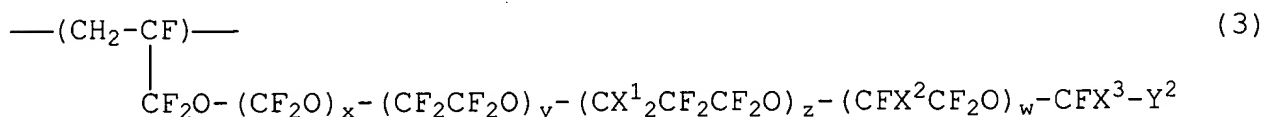
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~~20 carbon atoms,~~
$$-\text{CON} \begin{matrix} \nearrow \text{R}^2 \\ \searrow \text{R}^3 \end{matrix}$$
 in which R^2 and R^3 are the same or different and a hydrogen atom or a hydrocarbon group having 1 to 20 carbon atoms, $-\text{O}-\text{CF}=\text{CF}_2$, or $-\text{OCO}-\text{CZ}^3=\text{CZ}^1\text{Z}^2$ in which Z^1 and Z^2 are the same or different and a hydrogen atom or a fluorine atom, and Z^3 is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group.

2. (**Previously Presented**) The fluorine-containing allyl ether polymer according to claim 1, wherein A^1 in the formula (2) is a fluoroalkylene group having 1 to 60 carbon atoms or a fluoroalkylene group having an ether bond and 1 to 60 carbon atoms.

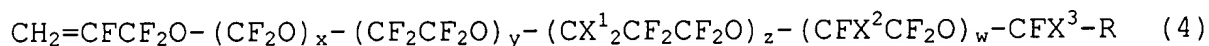
3. (**Currently Amended**) The fluorine-containing allyl ether polymer according to claim 1, wherein at least one of the repeating units is a repeating unit of the formula:



wherein X^1 is a hydrogen atom, a fluorine atom or a chlorine atom, X^2 is a hydrogen atom, a chlorine atom, a methyl group or a trifluoromethyl group, X^3 is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group, x , y , z and w are the same or different and a number of 0 to 20 provided that the sum of x , y , z and w is from 1 to 20, and Y^2 is ~~$-\text{COOH}$, $-\text{COOR}^4$ in which R^4 is a hydrocarbon group having 1~~

to ~~20 carbon atoms, CH_2OH ,~~ $\text{-CON} \begin{array}{l} \text{R}^5 \\ \text{R}^6 \end{array}$ in which R^5 and R^6 are the same or different and a hydrogen atom or a hydrocarbon group having 1 to 20 carbon atoms, -O-CF=CF_2 , or $\text{-OCO-CZ}^6=\text{CZ}^4\text{Z}^5$ in which Z^4 and Z^5 are the same or different and a hydrogen atom or a fluorine atom, and Z^6 is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group.

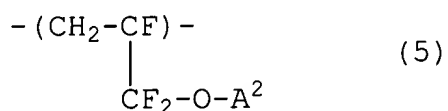
4. (**Currently Amended**) A homopolymer consisting of a fluorine-containing allyl ether polymer represented by the formula:



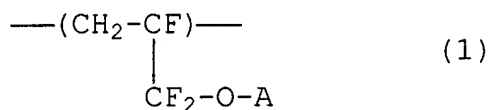
wherein X^1 is a hydrogen atom, a fluorine atom or a chlorine atom, X^2 is a hydrogen atom, a chlorine atom, a methyl group or a trifluoromethyl group, X^3 is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group, x , y , z and w are the same or different and a number of 0 to 20 provided that the sum of x , y , z and w is from 1 to 20, and R is ~~-COOH , -COOR^1 in which R^1 is a hydrocarbon group having 1 to 20 carbon atoms, CH_2OH ,~~ -CONH_2 , -CF=CF_2 , a hydrocarbon group having 1 to 20 carbon atoms or a perfluoroalkyl group having 1 to 20 carbon atoms.

5. (**Currently Amended**) The ~~fluorine-containing allyl ether polymer~~ homopolymer according to claim 4, which has a number average molecular weight of 1,000 to 1,000,000.

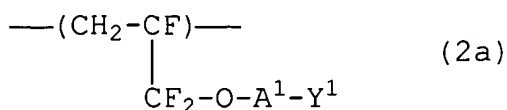
6. (**Previously Presented**) A fluorine-containing allyl ether copolymer consisting essentially of chains of at least two repeating units of the formula:



wherein A² is an organic group having 1 to 100 carbon atoms, wherein at least one repeating unit is a repeating unit of the formula:



wherein A is alkyl or fluoroalkyl groups having 1 to 50 carbon atoms, alkenyl or fluoroalkenyl groups having 2 to 50 carbon atoms, alkynyl or fluoroalkynyl groups having 2 to 50 carbon atoms, alkyl or fluoroalkyl groups having an ether bond and 1 to 60 carbon atoms, alkenyl or fluoroalkenyl groups having an ether bond and 2 to 60 carbon atoms, alkynyl or fluoroalkynyl groups having an ether bond and 2 to 60 carbon atoms, aryl or fluoroaryl groups having 4 to 30 carbon atoms, and at least one repeating unit is a repeating unit of the formula:

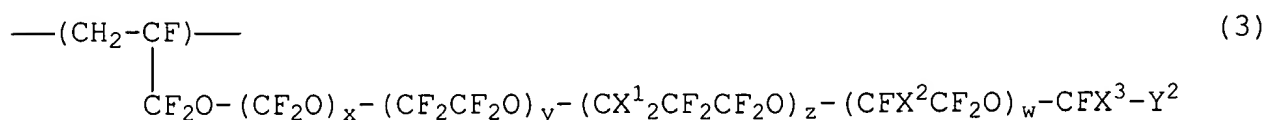


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wherein A¹ is a divalent organic group having 1 to 60 carbon atoms, and Y¹ is -CH₂OH, -COOH, -COOR¹ in which R¹ is a hydrocarbon group having 1 to

20 carbon atoms,
$$-\text{CON} \begin{matrix} \nearrow \text{R}^2 \\ \searrow \text{R}^3 \end{matrix}$$
 in which R² and R³ are the same or different and a hydrogen atom or a hydrocarbon group having 1 to 20 carbon atoms, -O-CF=CF₂, -OCO-CZ³=CZ¹Z² in which Z¹ and Z² are the same or different and a hydrogen atom or fluorine atom, and Z³ is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group, an epoxy group, a glycidyl group, a cyano group, a sulfonic acid group or a -SO₃R' in which R' is a monovalent organic group.

7. (**Previously Presented**) The fluorine-containing allyl ether polymer according to claim 6, wherein at least one of the repeating units is a repeating unit of the formula:



wherein X¹ is a hydrogen atom, a fluorine atom or a chlorine atom, X² is a hydrogen atom, a chlorine atom, a methyl group or a trifluoromethyl group, X³ is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group, x, y, z and w are the same or different and a number of 0 to 20 provided that the sum of x, y, z and w is from 1 to 20, and Y² is -COOH, -COOR⁴ in which R⁴ is a hydrocarbon group having 1

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to 20 carbon atoms, $-\text{CH}_2\text{OH}$, $-\text{CON} \begin{array}{l} \text{R}^5 \\ \text{R}^6 \end{array}$ in which R^5 and R^6 are the same or different and a hydrogen atom or a hydrocarbon group having 1 to 20 carbon atoms, $-\text{O}-\text{CF}=\text{CF}_2$, or $-\text{OCO}-\text{CZ}^6=\text{CZ}^4\text{Z}^5$ in which Z^4 and Z^5 are the same or different and a hydrogen atom or a fluorine atom, and Z^6 is a hydrogen atom, a fluorine atom, a chlorine atom or a trifluoromethyl group.

8. (**Previously Presented**) The fluorine-containing allyl ether polymer according to claim 6, wherein A^1 in the formula (2a) is a fluoroalkylene group having 1 to 60 carbon atoms or a fluoroalkylene group having an ether bond and 1 to 60 carbon atoms.